

PAGE MODE TERMINAL DRIVER #1 (PMT01)
(24307B - REV. 1438)

BINARY TAPE	24307-16008
SOURCE TAPES	24307-18057 24307-18058
SOURCE LISTING	24307-19004

PAGE 0001

0001

ASMB,L,R,C,B

★★ NO ERRORS★

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0001          ASMB,L,R,C,B
0003 00000    NAM PMT01,6
0004          ENT PMT01,P2616
0005          EXT ,ENTR,EXEC
0006*
0007*
0008* CALLING SEQUENCE (CALLED DIRECTLY BY USER FOR
0009* INITIALIZATION ONLY):
0010*
0011*      JSB PMT01
0012*      DEF ++5
0013*      DEF LU          LOGICAL UNIT
0014*      DEF P2616      EXTERNAL TERM. PARAM TABLE
0015*      DEF BRCFG      BAUD RATE & CONFG CODES
0016*      DEF EQTX       EQT EXTENSION TABLE
0017*      (RETURN POINT -- A=0=OK; A .NE. 0 = INVALID REQUEST)
0018*
0019*
0020* EQT USAGE
0021*
0022*      EQT07 - REQ RETURN ADR
0023*      EQT09 - REQ CONWD
0024*      EQT10 - PARM1 OF I/O REQ
0025*      EQT11 - PARM2 OF I/O REQ
0026*      EQT12 - BUFFER BYTE ADR
0027*      EQT13 - BUFFER CHAR COUNT
0028*      EQT14 - XMISSION LOG
0029*      EQT17 - POINTER TO EQTX
0030*      EQT18 - LENGTH OF EQTX
0031*      EQT19 - TERMINAL PARAMS (CHAR SIZE,ETC)
0032*      EQT20 - SYNC CHAR
0033*      EQT21 - INPUT/OUTPUT BAUD RATE CODES
0034*      EQT22 - READ ENTRY ADR
0035*      EQT23 - WRITE ENTRY ADR
0036*      EQT24 - CONTROL ENTRY ADR
0037*      EQT25 - I/F BOARD STATUS (& SPECIAL CHAR ADR DURING INIT ONLY)
0038*      EQT30 - FOUR
0039*      EQT31 - WORD
0040*      EQT32 - TIMER
0041*      EQT33 - BLOCK
0042*      EQT39 - FLAGS
0043*          BIT00 = TIMER-IN-PROGRESS
0044*          BIT14 = SYN-IN-PROGRESS
0045*          BIT15 = FILL-IN-PROGRESS
0046*      EQT40 - TEMPS(PREV. CHAR,FILL CNT,ETC.)
0047*      EQT41 - AUTO READ FLAG
0048*      EQT42 - DC1 BUFR
0049*      EQT43 - FLAGS
0050*          BIT00 = DC1 EXPECTED
0051*          BIT15 = OUTPUT ETB
0052*      EQT44 - TRACE INDEX

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0054*

0055*

** INITIALIZATION **

0056*

0057	00000	000000	LU	NOP	LOGICAL UNIT ADR
0058	00001	000000	TTABL	NOP	TERMINAL PARAM TABLE ADR
0059	00002	000000	BRCFG	NOP	BAUD RATE & CONFG CODES ADR
0060	00003	000000	EQTX	NOP	EQT EXTENSION TABLE ADR
0061*					
0062	00004	000000	PMT01	NOP	ENTRY POINT FOR INIT CALL
0063	00005	016001X	JSB	,ENTR	GET PARAM ADR'S
0064	00006	000000R	DEF	LU	FROM CALLING PROG
0065	00007	062003R	LDA	EQTX	GET EQTX ADR
0066	00010	072124R	STA	XADR	STORE INTO EXEC CALL PARAM LIST
0067	00011	017064R	JSB	SETQI	FORM & SAVE EQT ADR'S
0068	00012	063315R	LDA	TABSC	STORE SPECIAL CHAR TABLE ADR
0069	00013	173331R	STA	IQT25,I	INTO EQT25
0070	00014	062250R	LDA	READ	STORE READ ADR
0071	00015	173326R	STA	IQT22,I	INTO EQT22
0072	00016	062377R	LDA	WRITE	STORE WRITE ADR
0073	00017	173327R	STA	IQT23,I	INTO EQT23
0074	00020	062131R	LDA	CNTRL	STORE CNTRL ADR
0075	00021	173330R	STA	IQT24,I	INTO EQT24
0076*					
0077	00022	002400	CLA		
0078	00023	173332R	STA	IQT39,I	CLEAR EQT39 (FLAGS)
0079	00024	173333R	STA	IQT40,I	CLEAR EQT40 (TEMPS)
0080	00025	173334R	STA	IQT41,I	CLEAR EQT41 (AUTO READ FLAG)
0081	00026	173335R	STA	IQT42,I	CLR DC1 BUFR
0082	00027	173336R	STA	IQT43,I	CLR DC1-EXP/OUTPUT-ETB FLAGS
0083*					
0084	00030	067366R	LDB	=D24	FORM INDEX TO TRACE TABLE(-4)
0085	00031	163322R	LDA	IQT18,I	GET EQTL LENGTH
0086	00032	053367R	CPA	=D27	IF = 27 THEN NO TRACE TABLE
0087	00033	006400	CLR		NO TRACE TABLE SO SET INDEX TO 0
0088	00034	177337R	STB	IQT44,I	SET TRACE TABLE INDEX
0089*					
0090	00035	162002R	LDA	BRCFG,I	GET BAUD RATE/CONFIG CODES
0091	00036	001300	RAR		LEGAL CODES ARE 0,1,4,5
0092	00037	000010	SLA		SO IF BIT 1 IS SET,
0093	00040	026127R	JMP	BAD	THE CODE IS ILLEGAL
0094	00041	001200	RAL		REPOSITION BITS
0095	00042	010062	AND	P07	MASK OFF CONFIG CODE
0096	00043	073222R	STA	CFG	SAVE CODE
0097	00044	162002R	LDA	BRCFG,I	GET CODE AGAIN
0098	00045	001121	ARS,ARS		POSITION IT
0099	00046	001100	ARS		
0100	00047	010070	AND	M17	MASK OFF BAUD RATE CODE
0101	00050	073233R	STA	RATE	FORM WORD WITH
0102	00051	001727	ALF,ALF		BAUD RATE CODE
0103	00052	033233R	IOR	RATE	IN EACH BYTE
0104	00053	173325R	STA	IQT21,I	SET EQT21 (I/O BAUD RATE CODE)
0105*					
0106	00054	002400	CLA		
0107	00055	067222R	LDB	CFG	GET CONFIG CODE
0108	00056	005100	HRS		ELIMINATE HIT0 (0&1=HALF DUPLEX)
0109	00057	006002	SZB		

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0110 00060 063221R      LDA BT15      FULL DUPLEX, SO SET BIT15
0111 00061 040062      ADA P07        INCLUDE CHAR SIZE OF 7
0112 00062 173323R      STA IQT19,I    SET CHAR SIZE & LINE PLEX
0113*
0114 00063 067222R      LDB CFG        GET CONFIG CODE
0115 00064 004010      SLB            IF ODD THEN SYNC ELSE ASYNC
0116 00065 026072R      JMP SYNC       ODD, SO SYNC & ODD PARITY
0117 00066 032400 ASYNC CLA            EVEN, SO ASYNC & EVEN PARITY
0118 00067 173324R      STA IQT20,I    STORE ZERO IN EQT20
0119 00070 063370R      LDA #B40       PRIME TO SET EQT19 PARITY FIELD
0120 00071 026075R      JMP PRTY
0121 00072 063321R SYNC LDA SYN        GET SYN CHAR
0122 00073 173324R      STA IQT20,I    STORE IN EQT20
0123 00074 063371R      LDA #B20       PRIME TO SET EQT19 PARITY FIELD
0124 00075 133323R PRTY IOR IQT19,I    MERGE INTO PARITY FIELD
0125 00076 173323R      STA IQT19,I    (BITS 4,5) OF EQT19
0126*
0127* FIND # OF STOPS NEEDED FOR BAUD RATE
0128*
0129 00077 067241R      LDB STOP        GET STOP BIT WORD
0130 00100 063233R      LDA RATE        GET BAUD RATE CODE
0131 00101 002003      SZA,RSS         BAUD RATE CODE = 0?
0132 00102 060070      LDA P15         YES,EXT CLOCK, ASSUME 9600 BPS
0133 00103 003004      CMA,INA        SHIFT STOP BIT WORD UNTIL LSB
0134 00104 005300      RBR            GETS PROPER STOP BIT CODE
0135 00105 002006      INA,SZA         (0=1 STOP, 1=2 STOPS)
0136 00106 026104R      JMP *-2
0137 00107 163323R      LDA IQT19,I
0138 00110 004010      SLB            LSB = 1 (2 STOPS)?
0139 00111 033372R      IOR #B200      YES, SO SET STOP BIT FIELD
0140 00112 173323R      STA IQT19,I    IN EQT19
0141*
0142* SET UP EXEC CONTROL CALL (INITIALIZE)
0143*
0144 00113 162000R      LDA LU,I        GET LOGICAL UNIT #
0145 00114 010072      AND M77
0146 00115 040067      ADA P64
0147 00116 073223R      STA CONWD       ADD INIT FUNCTION CODE
0148 00117 015002X      JSB EXEC        TO FORM CONTROL WORD
0149 00120 000125R      DEF *-5         EXECUTE INIT CALL
0150 00121 000056      DEF P03         RETURN ADR
0151 00122 001223R      DEF CONWD      CONTROL REQ CODE = 3
0152 00123 000053      DEF P00         CONTROL INFO
0153 00124 000000 XADR BSS 1          PARM1 = DUMMY
0154 00125 010074      AND RBYT        PARM2 = STORAGE FOR EQTX ADR
0155 00126 126004R      JMP PMT01,I    PRESERVE STATUS
0156*
0157 00127 002404 BAD CLA,INA         RETURN TO USER
0158 00130 126004R      JMP PMT01,I    INDICATE INVALID CALL TO PMT01

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0160*
0161*          ** CONTROL REQUESTS **
0162*
0163 00131 000132R CNTRL DEF ++1
0164 00132 000000      NOP
0165 00133 017121R      JSB SETQ      SET EQT LINKS, SAVE A&B REG
0166 00134 002400      CLA            INDICATE LOG CALL IS FROM CNTRL
0167 00135 015733R      JSB LOG        LOG TO TRACE TABLE, RESTORE A&B
0168 00136 006021      SSB,RSS        INITIATE?
0169 00137 026216R      JMP CTL01      NO, REC'D CHAR FOR SPEED DETECT
0170 00140 006400      CLB            YES,ZERO OUT
0171 00141 177346R      STB EQT14,I    TRANSMISSION LOG
0172 00142 177363R      STB EQT42,I    CLR DC1 BUFR
0173 00143 163341R      LDA EQT09,I    GET CONWD
0174 00144 013226R      AND FCODE      MASK OFF F-CODE
0175 00145 053310R      CPA LOPEN      IS IT LINE=OPEN?
0176 00146 026162R      JMP CTL02      YES
0177 00147 053311R      CPA LCLOS      IS IT LINE=CLOSE?
0178 00150 026167R      JMP CTL03      YES
0179 00151 053312R      CPA AREAD      IS IT AUTO-READ?
0180 00152 026172R      JMP CTL04      YES
0181 00153 053313R      CPA PREAD      IS IT PSEUDO-READ?
0182 00154 026175R      JMP CTL11      YES, GO START READ FOR DC1
0183 00155 053314R      CPA CSSENS     IS IT CURSOR SENSE?
0184 00156 026206R      JMP CTL05      YES
0185 00157 002400      CTL06 CLA        INDICATE CONTINUATION
0186 00160 036132R      ISZ CNTRL+1     (RETURN +2) WITH NO
0187 00161 126132R      JMP CNTRL+1,I   DIRECTIVES (AREG=0)
0188*
0189* LINE OPEN REQ
0190*
0191 00162          CTL02 EQU *
0192 00162 163342R      LDA EQT10,I    GET PARM1 (LINE OPEN OPTION)
0193 00163 006400      CLB            NO TIMER REQUEST
0194 00164 053216R      CPA ASD         RECEIVE WITH AUTO SPEED DETECT?
0195 00165 067373R      LDB =D-1200    YES,SET 2 MIN TIMER REQUEST
0196 00166 026157R      JMP CTL06      GO TO CONTINUATION RETURN
0197*
0198* LINE CLOSE REQ
0199*
0200 00167          CTL03 EQU *
0201 00167 002400      CLA            CLEAR AUTO READ FLAG
0202 00170 173362R      STA EQT41,I    IN EQT41
0203 00171 026157R      JMP CTL06      GO TO CONTINUATION RETURN
0204*
0205* AUTO-READ REQ
0206*
0207 00172          CTL04 EQU *
0208 00172 163342R      LDA EQT10,I    GET PARM1 (AUTO-READ FLAG)
0209 00173 173362R      STA EQT41,I    SAVE IT
0210 00174 126132R      JMP CNTRL+1,I  RETURN COMPLETE (+1)
0211*
0212* PSEUDO READ REQ
0213*
0214 00175          CTL11 EQU *
0215 00175 002400      CLA

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0216 00176 173360R STA EQT39,I CLR FLAGS
0217 00177 002004 INA
0218 00200 133364R JOR EQT43,I
0219 00201 173364R STA EQT43,I SET DC1=EXPECTED FLAG
0220 00202 063221R LDA HT15 INDICATE START-READ DRCTV
0221 00203 006400 CTL12 CLB NO TIMER REQ
0222 00204 036132R ISZ CNTRL+1 BUMP RTRN ADR
0223 00205 126132R JMP CNTRL+1,I RTRN +2 (CONTINUATION)
0224*
0225* CURSOR SENSE
0226*
0227 00206 CTL05 EQU *
0228 00206 163343R LDA EQT11,I GET PARM2 (BUFR ADR) & SET
0229 00207 173342R STA EQT10,I IN EQT10
0230 00210 060057 LDA P04 SET BUFR LENGTH TO 4
0231 00211 173343R STA EQT11,I
0232 00212 060051 LDA N02 SET CHAR COUNT TO +2 TO
0233 00213 173345R STA EQT13,I OUTPUT ESC=SMALL A SEQUENCE
0234 00214 016704R JSB CKSYN INDICATE SYN OR NULL FOR OUTPUT
0235 00215 026203R JMP CTL12 GO RTRN +2
0236*
0237* CONTINUE, AUTO SPEED HAS BEEN INDICATED & A
0238* CHARACTER HAS BEEN RECEIVED, SHOULD BE DC1,
0239*
0240 00216 CTL01 EQU *
0241 00216 016670R JSR BITCK CHECK STATUS, RETURN ++1 - ++4
0242 00217 026237R JMP CTL07 TIMEOUT
0243 00220 026226R JMP CTL08 LINE ERR.
0244 00221 000000 NOP DATA ERROR
0245 00222 063234R CTL10 LDA SAVA GET INPUT
0246 00223 010073 AND M177 MASK OFF CHAR
0247 00224 053317R CPA DC1 CHAR = DC1?
0248 00225 026230R JMP CTL09 YES
0249 00226 006400 CTL08 CLB NO, INDICATE NO TIMER REQ
0250 00227 026157R JMP CTL06 RTRN & KEEP TRYING TIL TIMEOUT
0251*
0252* FOR AUTO-SPEED PHYS DVR CONFIGS MAIN CHAN FOR 2400 BPS,
0253* AUX CHANS 16-20 FOR 1200,600,300,150,110, SETS EQT21
0254* TO 2400 BPS, SETS B-REG TO INTPTING UNIT #. IF B > 15
0255* THEN LOGICAL MUST FIND SPEED & CHANGE EQT21.
0256*
0257 00230 CTL09 EQU *
0258 00230 047230R ADB N16 B=UNIT# = 16
0259 00231 006020 SSB UNIT AN AUX CHAN (>15)?
0260 00232 126132R JMP CNTRL+1,I NO,EQT21 OK, RETURN COMPLETE
0261 00233 046242R ADB SPEED YES, SELECT PROPER BAUD
0262 00234 164001 LDB B,I RATE CODE FROM TABLE
0263 00235 177353R STB EQT21,I SET SPEED IN EQT21
0264 00236 126132R JMP CNTRL+1,I RETURN COMPLETE
0265*
0266 00237 CTL07 EQU * TIMEOUT
0267 00237 060055 LDA P02 SET LINE OPEN TIMEOUT STATUS
0268 00240 017176R JSB STAT STORE STATUS IN EQT4
0269 00241 126132R JMP CNTRL+1,I RETURN COMPLETE
0270*
0271*

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0272 00242 000243R SPEED DEF **1 BAUD RATE CODE TABLE

0274*		CODE	UNIT	RATE
0276	00243 004411	OCT 4411	16	1200
0277	00244 003407	OCT 3407	17	600
0278	00245 002405	OCT 2405	18	300
0279	00246 001403	OCT 1403	19	150
0280	00247 000401	OCT 0401	20	110

0282*

0283*

** READ REQUESTS **

0284*

0285* READ--CALLED BY PHYS DVR. A=DVR STATUS/DATA,

0286* B < 0 = INITIATION, > 0 = CONTINUATION.

0287*

0288 00250 000251R READ DEF **1

0289 00251 000000 NOP

0290 00252 017121R JSB SETQ

SET EQT LINKS, SAVE A&B REG

0291 00253 002404 CLA,INA

INDICATE LOG CALL IS FROM READ

0292 00254 016733R JSB LOG

LOG TO TRACE TABLE, RESTORE A&B

0293 00255 006021 SSB,RSS

INITIATE?

0294 00256 026275R JMP RD01

NO

0295 00257 017037R JSB RSET

RESET POINTERS & COUNTERS

0296 00260 126251R JMP READ+1,I

INVALID REQ (BUFR LENGTH = 0)

0297 00261 006400 CLB

0298 00262 077243R STB TMREQ

NO TIMER REQ

0299 00263 177360R STB EQT39,I

CLR FLAGS

0300 00264 163363R LDA EQT42,I

GET DC1 BUFR

0301 00265 053317R CPA DC1

RCV'D DC1 CHAR YET?

0302 00266 026325R JMP RD03

YES,PSEUDO POLL IS COMPLETE

0303 00267 002404 CLA,INA

NO, SET DC1=

0304 00270 133364R IOR EQT43,I

EXPECTED FLAG

0305 00271 173364R STA EQT43,I

0306 00272 063221R LDA RT15

INDICATE START READ DIRECTIVE

0307 00273 036251R PD15 ISZ READ+1

BUMP RTRN ADR

0308 00274 126251R JMP READ+1,I

RTRN +2 (CONTINUE)

0309*

0310 00275 RD01 EQU *

0311 00275 016670R JSB BITCK

CHECK STATUS, RETURN **1 - **4

0312 00276 026363R JMP RD06

TIMEOUT

0313 00277 026372R JMP RD07

LINE ERR

0314 00300 026374R JMP RD08

DATA ERR

0315*

0316 00301 PD05 EQU *

0317 00301 017205R JSB TMCK

CHECK TIMER--CLR IF IN PROGRESS

0318 00302 063234R LDA SAVA

GET STATUS/DATA

0319 00303 010073 AND M177

MASK OFF DATA

0320 00304 053321R CPA SYN

SYN CHAR?

0321 00305 026346R JMP RD11

YES, IGNORE IT

0322 00306 167364R LDB EQT43,I

GET DC1-EXP FLG

0323 00307 006011 SLB,RSS

DC1 EXPECTED?

0324 00310 026336R JMP RD09

NO

0325 00311 005566 ERB,CLE,ELB

YES

0326 00312 177364R STB EQT43,I

CLR DC1-EXP FLG

0327 00313 053317R CPA DC1

CHAR = DC1?

0328 00314 026320R JMP RD10

YES

0329 00315 060063 LDA B10

NO, INDICATE PSEUDO=READ

0330 00316 017176R JSB STAT

ERROR IN STATUS

0331 00317 126251R JMP READ+1,I

RTRN +1 (COMPLETE)

0332 00320 RD10 EQU *

0333 00320 173363R STA EQT42,I

SAVE DC1 CHAR

0334 00321 163341R LDA EQT09,I

GET REQ CODE

0335 00322 010056 AND RCODE

ISOLATE REQ CODE

0336 00323 050056 CPA P03

READ OR PSEUDO READ?

0337 00324 126251R JMP READ+1,I

PSEUDO=READ, RTRN +1 (COMPLETE)

0395*

0396*

0397*

** WRITE REQUESTS **

0398*

0399* WRITE--CALLED BY PHYS DVR, A=DVR STATUS/DATA,

0400* B < 0 = INITIATION, > 0 = CONTINUATION.

0401*

0402 00377 000400R WRITE DEF **1

0403 00400 000000 NOP

0404 00401 017121R JSB SETQ SET EQT LINKS,SAVE A&B REG

0405 00402 000055 LDA P02 INDICATE LOG CALL IS FROM WRITE

0406 00403 016733R JSB LOG LOG TO TRACE TABLE. RESTORE A&B

0407 00404 006021 SSB,RSS INITIATE?

0408 00405 026417R JMP WRT01 NO

0409 00406 017037R JSB RSET YES,RESET POINTERS & COUNTERS

0410 00407 126400R JMP WRITE+1,I INVALID REQ (BUFR LENGTH = 0)

0411 00410 006400 CLB

0412 00411 177360R STB EQT39,I CLEAR FLAGS

0413 00412 177361R STB EQT40,I AND TEMPS

0414 00413 177363R STB EQT42,I CLR DC1 BUFR

0415 00414 016704R JSB CKSYN INDICATE SYN OR NULL FOR OUTPUT

0416 00415 036400R ISZ WRITE+1 BUMP RTRN ADR

0417 00416 126400R JMP WRITE+1,I RTRN +2 (CONTINUE)

0418*

0419 00417 WRT01 EQU *

0420 00417 016670R JSB BITCK CHECK STATUS. RETURN **1 = **4

0421 00420 026532R JMP WRT06 TIMEOUT

0422 00421 026541P JMP WRT09 LINE ERR

0423 00422 000000 NOP DATA ERR

0424 00423 000010 SLA BREAK?

0425 00424 026500R JMP WRT07 YES

0426 00425 017205R JSB TMCK CHECK TIMER--CLR IF IN PROG

0427 00426 163360R LDA EQT39,I GET FLAGS

0428 00427 002020 SSA FILL IN PROGRESS?

0429 00430 026544R JMP WRT10 YES

0430 00431 001200 RAL NO

0431 00432 002020 SSA SYN IN PROGRESS?

0432 00433 026554R JMP WRT11 YES

0433 00434 163360R LDA EQT39,I NO. GET FLAGS

0434 00435 001300 RAR

0435 00436 002011 SLA,RSS ESC FLAG SET?

0436 00437 026503R JMP WRT12 NO

0437 00440 001566 ERA,CLE,ELA YES, RESET

0438 00441 001200 RAL ESC FLAG

0439 00442 173360R STA EQT39,I

0440*

0441* SEE IF PREV CHAR REQUIRES FILL CHARS

0442*

0443 00443 006400 CLB TABLE INDEX = 0

0444 00444 WRT13 EQU * START TABLE SEARCH

0445 00444 063271R LDA ,CHAR GET CHAR TABLE ADR

0446 00445 040001 ADA B ADD INDEX

0447 00446 053307R CPA ,END1 END OF TABLE?

0448 00447 026503R JMP WRT12 YES,FILLS NOT REQ'D

0449 00450 160000 LDA A,I GET TABLE CHAR

0450 00451 153361R CPA EQT40,I SAME AS PREVIOUS OUTPUT CHAR?

0451	00452	026455R	JMP	WRT14	YES, B=POSITION IN TBL0,1,2 OR 3
0452	00453	006004	INB		NO,BUMP INDEX &
0453	00454	026444R	JMP	WRT13	TRY NEXT CHAR
0454*					
0455	00455		WRT14	EQU *	FILL REQ'D.
0456	00455	060046	LDA	N05	=5. IF B .LT. 5,CHAR = M,U,V OR
0457	00456	040001	ADA	B	BACK-SLASH SO COMPUTE FILLS
0458	00457	002021	SSA,RSS		B .LT. 5?
0459	00460	026474R	JMP	WRT15	NO,# FILLS SMALL SO USE MAX (3)
0460*					REGARDLESS OF CHAR OR RATE
0461	00461	163353R	LDA	EQT21,I	YES,GET BAUD RATE CODE (BRC)
0462	00462	010074	AND	RBYT	MASK OFF RIGHT BYTE
0463	00463	002003	SZA,RSS		BAUD RATE CODE = 0?
0464	00464	060070	LDA	P15	YES,EXT CLOCK. ASSUME 9600 BPS
0465	00465	040052	ADA	N01	SUBT 1 TO MAKE RELATIVE TO ZERO
0466	00466	001121	ARS,ARS		BRC'S DIVIDED INTO 4 GROUPS
0467	00467	043244R	ADA	.TPTR	GET ADR OF CORRESPONDING TBL PTR
0468	00470	160000	LDA	A,I	GET TBL POINTER TO TABL0,1,2 OR
0469	00471	040001	ADA	B	ADD TABLE POSITION
0470	00472	160000	LDA	A,I	GET FILL COUNT FROM TABLE
0471	00473	002001	RSS		
0472	00474	060050	WRT15	LDA N03	USE +3 FOR FILL COUNT
0473	00475	173361R	STA	EQT40,I	STORE NEG FILL COUNT
0474	00476	002400	CLA		INDICATE NULL FOR OUTPUT
0475	00477	026527R	JMP	WRT21	
0476*					
0477	00500		WRT07	EQU *	BREAK DETECTED
0478	00500	060056	LDA	P03	
0479	00501	017176R	JSB	STAT	SET BREAK STATUS
0480	00502	026657R	JMP	WRT23	GO CNVRT I-LOG,RTRN COMPLETE
0481*					
0482	00503		WRT12	EQU *	
0483	00503	163361R	LDA	EQT40,I	GET PREVIOUS CHAR
0484	00504	053224R	CPA	ESC	WAS IT AN ESC?
0485	00505	002001	RSS		YES
0486	00506	026512R	JMP	WRT16	NO
0487	00507	163360R	LDA	EQT39,I	GET FLAGS
0488	00510	030055	IOR	BT01	SET ESC FLAG
0489	00511	173360R	STA	EQT39,I	
0490*					
0491	00512		WRT16	EQU *	
0492	00512	163364R	LDA	EQT43,I	
0493	00513	002020	SSA		OUTPUT ETB?
0494	00514	026564R	JMP	WRT17	YES
0495	00515	163341R	LDA	EQT09,I	GET CONWD
0496	00516	010056	AND	RCODE	MASK OFF REG CODE
0497	00517	050056	CPA	P03	CONTROL?
0498	00520	026607R	JMP	WRT18	YES,MUST BE CURSOR SENSE
0499	00521	163345R	LDA	EQT13,I	NO,WRITE. GET CHAR COUNT
0500	00522	002003	SZA,RSS		CHAR COUNT = 0?
0501	00523	026624R	JMP	WRT19	YES,ALL CHARS HAVE BEEN OUTPUT
0502	00524	050054	CPA	P01	NO. COUNT = +1?
0503	00525	026632R	JMP	WRT20	YES,ETX HAS BEEN OUTPUT
0504	00526	016642R	JSB	GET	NO,A-REG GETS NEXT OUTPUT CHAR
0505	00527		WRT21	EQU *	
0506	00527	067243R	IDB	TMREQ	RESTORE CURRENT TIME REG

```

0507 00530 036400R      ISZ WRITE+1      BUMP RTRN ADR
0508 00531 126400R      JMP WRITE+1,I RTRN +2(CONTINUE)
0509*
0510 00532          WRT08 EQU *          TIMEOUT,A=STATUS ROTATED LEFT 2
0511 00532 002021      SSA,RSS          LINE ERROR FOR 2 SECS?
0512 00533 026537R      JMP WRT22        NO
0513 00534 060057      LDA P04          YES,INDICATE LINE ERROR
0514 00535 017176R      JSB STAT          IN STATUS
0515 00536 026557R      JMP WRT23        GO CNVRT T=LOG & RTRN COMPLETE
0516 00537          WRT22 EQU *
0517 00537 016776R      JSB OK          CLR TMR-IN-PROG,INDICATE NOP
0518 00540 026527R      JMP WRT21        DRCTV,GO RTRN +2
0519*
0520 00541          WRT09 EQU *          LINE ERROR
0521 00541 016721R      JSB FRRL        PROCESS LINE ERROR
0522 00542 002400      CLA            INDICATE NULL FOR OUTPUT
0523 00543 026527R      JMP WRT21        GO RTRN +2
0524*
0525 00544          WRT10 EQU *          FILL IN PROGRESS
0526 00544 137361R      ISZ EQT40,I      BUMP COUNT, LAST FILL?
0527 00545 026552R      JMP WRT26        NO
0528 00546 163360R      LDA EQT39,I      YES,GET FLAGS
0529 00547 001665      ELA,CLE,ERA      CLR FILL-IN-PROG FLAG
0530 00550 173360R      STA EQT39,I
0531 00551 026512R      JMP WRT16
0532 00552 002400      WRT26 CLA          INDICATE NULL FOR OUTPUT
0533 00553 026527R      JMP WRT21        GO RTRN +2
0534*
0535 00554          WRT11 EQU *          SYN IN PROGRESS
0536 00554 137361R      ISZ EQT40,I      BUMP COUNT, LAST SYN?
0537 00555 026562R      JMP WRT27        NO
0538 00556 163360R      LDA EQT39,I      YES,GET FLAGS
0539 00557 013374R      AND =0137777    CLEAR SYN-IN-PROG FLAG
0540 00560 173360R      STA EQT39,I
0541 00561 026512R      JMP WRT16
0542 00562 063321R      WRT27 LDA SYN      INDICATE SYN FOR OUTPUT
0543 00563 026527R      JMP WRT21        GO RTRN +2
0544*
0545 00564          WRT17 EQU *          REQ = READ, OUTPUT ETB
0546 00564 163345R      LDA EQT13,I      GET COUNT
0547 00565 050052      CPA N01          -1?
0001 00566 026602R      JMP WRT28        YES
0002 00567 163364R      LDA EQT43,I      NO,DONE SO CLR
0003 00570 001665      ELA,CLE,ERA      OUTPUT-ETB FLAG
0004 00571 173364R      STA EQT43,I
0005 00572          WRT31 EQU *
0006 00572 017037R      JSB RSET        NO,DONE,
0007 00573 126400R      JMP WRITE+1,I ERROR, BUFR LENGTH = 0
0008 00574 002400      CLA
0009 00575 173360R      STA EQT39,I      CLR FLAGS
0010 00576 063221R      LDA BT15        INDICATE START READ DRCTV
0011 00577 067243R      LDB TMREQ       RESTORE CURRENT TIME REQUEST
0012 00600 036400R      ISZ WRITE+1      BUMP RETURN ADR
0013 00601 126400R      JMP WRITE+1,I RTRN +2 (CONTINUE)
0014 00602          WRT28 EQU *
0015 00602 137345R      ISZ EQT13,I      BUMP CHAR COUNT

```

```

0016 00603 000000 NOP
0017 00604 063225R LDA ETB INDICATE ETB FOR OUTPUT
0018 00605 173361R STA EQT40,I SAVE AS PREVIOUS CHAR
0019 00606 026527R JMP WRT21 GO OUTPUT ETB
0020*
0021 00607 WRT18 EQU * REQ = CURSOR SENSE
0022 00607 163345R LDA EQT13,I GET COUNT
0023 00610 050051 CPA N02 -2?
0024 00611 026615R JMP WRT29 YES,GO OUTPUT ESC
0025 00612 050052 CPA N01 -1?
0026 00613 026622R JMP WRT30 YES,GO OUTPUT SMALL A
0027 00614 026572R JMP WRT31 NO,DONE.
0028 00615 WRT29 EQU *
0029 00615 063224R LDA ESC INDICATE ESC FOR OUTPUT
0030 00616 WRT32 EQU *
0031 00616 173361R STA EQT40,I SAVE AS PREVIOUS CHAR
0032 00617 137345R ISZ EQT13,I BUMP CHAR COUNT
0033 00620 000000 NOP
0034 00621 026527R JMP WRT21 GO OUTPUT CHAR
0035 00622 WRT30 EQU *
0036 00622 063237R LDA SMALLA INDICATE SMALL A FOR OUTPUT
0037 00623 026615R JMP WRT32
0038*
0039 00624 WRT19 EQU *
0040 00624 163341R LDA EQT09,I GET CONWD
0041 00625 013226R AND FCODE MASK OFF F-CODE
0042 00626 002002 SZA APPEND ETX?
0043 00627 026632R JMP WRT20 NO
0044 00630 063320R LDA ETX YES,INDICATE ETX FOR OUTPUT
0045 00631 026616R JMP WRT32 GO OUTPUT ETX
0046*
0047 00632 WRT20 EQU *
0048 00632 163362R LDA EQT41,I GET AUTO READ FLAG
0049 00633 010055 AND P02 MASK OFF BIT 1
0050 00634 002003 SZA,RSS AUTO READ?
0051 00635 026657R JMP WRT23 NO,GO CNVRT T-LOG,RTRN COMPLETE
0052 00636 002404 CLA,INA YES
0053 00637 133364R IOR EQT43,I
0054 00640 173364R STA EQT43,I SET DC1-EXP FLAG
0055 00641 026572R JMP WRT31 GO START READ
0056*
0057*
0058* GET--GETS CHARS FROM OUTPUT BUFFER; BUMPS T-LOG,
0059* BYTE POINTER & COUNTER, SAVES CHAR AS "PREVIOUS
0060* CHAR".
0061*
0062 00642 000000 GET NOP
0063 00643 167344R LDB EQT12,I GET BYTE ADR
0064 00644 004065 CLE,ERR CNVRT TO WORD ADR
0065 00645 160001 LDA B,I GET WORD
0066 00646 002041 SEZ,RSS BYTE ADR EVEN?
0067 00647 001727 ALF,ALF YES,USE LEFT BYTE
0068 00650 010074 AND RBYT MASK OFF CHAR TO BE OUTPUT
0069 00651 173361R STA EQT40,I SAVE AS "PREV-CHAR"
0070 00652 137344R ISZ EQT12,I BUMP BYTE ADR
0071 00653 137346R ISZ EQT14,I BUMP T-LOG

```

0072	00654	137345R	ISZ	EQT13,I	BUMP BYTE COUNT
0073	00655	000000	NOP		
0074	00656	126642R	JMP	GET,I	RTRN +1
0075*					
0076	00657		WRT23	EQU *	CNVRT T-LOG
0077	00657	167343R	LDB	EQT11,I	GET BUFR LENGTH
0078	00660	006020	SSB		WORDS OR BYTES SPECIFIED?
0079	00661	026666R	JMP	WRT33	BYTES,SO LEAVE T-LOG AS IS
0080	00662	163346R	LDA	EQT14,I	WORDS,SO CONVERT T-LOG TO
0081	00663	002004	INA		WORD COUNT ($A=(TLOG+1)/2$)
0082	00664	001100	ARS		
0083	00665	173346R	STA	EQT14,I	STORE WORD COUNT
0084	00666		WRT33	EQU *	
0085	00666	163346R	LDA	EQT14,I	GET T-LOG
0086	00667	126400R	JMP	WRITE+1,I	RTRN +1 (COMPLETE)

0088*

0089* BITCK--CHECKS STATUS RETURNED BY PHYS DVR

0090* RETURNS:

0091* +1 - TIMEOUT

0092* +2 - LINE ERROR

0093* +3 - DATA ERROR (PARITY/CHAR LOST)

0094* +4 - NO ERRORS (LSB OF A-REG=BREAK STATUS BIT)

0095*

0096	00670	000000	BITCK	NOP	
0097	00671	063234R	LDA	SAVA	GET STATUS
0098	00672	001210	RAL,SLA		BIT 15 SET?
0099	00673	126670R	JMP	BITCK,I	YES,TIMEOUT, RTRN +1
0100	00674	036670R	ISZ	BITCK	BUMP RTRN ADR
0101	00675	001210	RAL,SLA		BIT 14 SET?
0102	00676	126670R	JMP	BITCK,I	YES,LINE ERR. RTRN +2
0103	00677	036670R	ISZ	BITCK	BUMP RTRN ADR
0104	00700	001232	RAL,SLA,RAL		BIT 13 SET?
0105	00701	126670R	JMP	BITCK,I	YES,DATA ERR. RTRN +3
0106	00702	036670R	ISZ	BITCK	BUMP RTRN ADR
0107	00703	126670R	JMP	BITCK,I	RTRN +4

0109*

0110* CKSYN--CHECKS EQT20 FOR SYNCHRONOUS XMISSION.

0111* IF SO,SETS SYN-IN-PROGRESS FLAG,AND SETS COUNT

0112* TO -4. RETURNS WITH A-REG = SYN OR NULL CHAR WITH

0113* START-READ & CURRENT TIMER REQUEST INDICATED.

0114*

0115	00704	000000	CKSYN	NOP	
0116	00705	163352R	LDA	EQT20,I	GET SYN OR NULL CHAR
0117	00706	002003	SZA,RSS		SYNC XMISSION?
0118	00707	026715R	JMP	CKS01	NO
0119	00710	163360R	LDA	EQT39,I	YES,GET FLAGS
0120	00711	033220R	IOR	BT14	SET SYN-IN-PROG FLAG
0121	00712	173360R	STA	EQT39,I	
0122	00713	060047	LDA	N04	SET COUNT TO OUTPUT
0123	00714	173361R	STA	EQT40,I	4 SYN CHARS
0124	00715		CKS01	EGU *	
0125	00715	163352R	LDA	EQT20,I	INDICATE NULL OR SYN
0126	00716	033220R	IOR	BT14	+ START-WRITE DRCTV
0127	00717	067243R	LDB	THREQ	RESTORE CURRENT TIMER REQ
0128	00720	126704R	JMP	CKSYN,I	RTRN +1

0130*

0131* ERRL--PROCESSES LINE ERRORS, INITIATES 2 SECOND

0132* TIMER WHEN LINE ERROR FIRST DETECTED.

0133*

0134	00721	000000	ERRL	NOP	
0135	00722	163360R	LDA	EQT39,I	GET FLAGS
0136	00723	000010	SLA		TIMER IN PROGRESS?
0137	00724	002401	CLA,RSS		YES,INDICATE TIMER TO CONTINUE
0138	00725	063375R	LDA	=D-20	NO,INDICATE 2-SEC TIMER REQ INIT
0139	00726	073243R	STA	THREQ	SAVE TIME REQ
0140	00727	163360R	LDA	EQT39,I	GET FLAGS
0141	00730	030054	IOR	P01	SET TIMER-IN-PROG FLG


```
0142 00731 173360R    STA EQT39,I    STORE FLAGS
0143 00732 126721R    JMP ERR1,I    RTRN +1
```

0145*

0146* LOG--STORES DRIVER ENTRY ID CODE, SEQUENTIAL COUNT,
0147* A&B REG VALUES UPON ENTRY, & DEVICE STATUS INTO TRACE
0148* TABLE (IF AVAILABLE). ENTER WITH A=REG = ID CODE (0=
0149* CNTRL, 1=READ, 2=WRITE),
0150*

```
0151 00733 000000 LOG    NOP
0152 00734 167365R    LDB EQT44,I    GET TRACE TABLE INDEX
0153 00735 006003    SZB,RSS    TRACE TABLE PRESENT?
0154 00736 026773R    JMP LOG1    NO
0155 00737 073227R    STA ID    SAVE ID CODE
0156 00740 037236R    ISZ SEQ    INCR INTERNAL SEQ COUNTER
0157 00741 000000    NOP
0158 00742 063236R    LDA SEQ    GET NEW COUNT
0159 00743 001727    ALF,ALF    POSITION IN LEFT BYTE
0160 00744 010075    AND,LBYT    MASK OFF LEFT BYTE
0161 00745 033227R    IOR ID    INCLUDE ID CODE
0162 00746 044057    ADB P04    BUMP INDEX TO NEXT 4-WORD ENTRY
0163 00747 177365R    STB EQT44,I    SAVE INDEX
0164 00750 007004    CMB,INB
0165 00751 147350R    ADB EQT18,I    B=(EQT LGTH - TRACE TBL INDEX)
0166 00752 006021    SSR,RSS    END OF TABLE?
0167 00753 026756R    JMP LOG2    NO
0168 00754 067376R    LDB #D28    YES
0169 00755 177365R    STB EQT44,I    RESET INDEX TO FIRST ENTRY
0170 00756 007400 LOG2  CCB
0171 00757 147365R    ADB EQT44,I
0172 00760 047350R    ADB EQT18    ENTRY ADR=EQT18 ADR +INDEX-1
0173 00761 170001    STA B,I    STORE SEQ/ID INTO WORD 1
0174 00762 006004    INB
0175 00763 063234R    LDA SAVA
0176 00764 170001    STA B,I    STORE A=REG INTO WORD 2
0177 00765 006004    INB
0178 00766 063235R    LDA SAVB
0179 00767 170001    STA B,I    STORE B=REG INTO WORD 3
0180 00770 006004    INB
0181 00771 163357R    LDA EQT25,I
0182 00772 170001    STA B,I    STORE BOARD STATUS INTO WORD 4
0183 00773 063234R LOG1  LDA SAVA    RESTORE A & B
0184 00774 067235R    LDB SAVB
0185 00775 126733R    JMP LOG,I    RTRN +1
```

0187*

0188* OK--CLEARS TIMER-IN-PROGRESS FLAG; SETA A&B REGS
0189* TO INDICATE NOP DIRECTIVE & NO TIMER REQ TO PHYS DVR.
0190*

```
0191 00776 030000 OK    NOP
0192 00777 163360R    LDA EQT39,I    GET FLAGS
0193 01000 001566    FRA,CLE,ELA    CLR TIMER-IN=PRG FLG
0194 01001 173360R    STA EQT39,I
0195 01002 063217R    LDA BT13    NOP DRCTV
```

0196	01003	006400	CLB	NO TIME REQ
0197	01004	077243R	STR TMREQ	
0198	01005	126776R	JMP OK,I	RTRN +1

0200*

0201* PUT--PUTS CHARS INTO INPUT BUFFER UNLESS FULL.

0202* ENTER WITH A-REG = INPUT CHAR

0203*

0204	01006	000000	PUT	NOP	
0205	01007	167345R	LDB EQT13,I	GET CHAR COUNT	
0206	01010	006003	SZB,RSS	ZERO?	
0207	01011	127006R	JMP PUT,I	YES,DON'T STORE CHAR.	RTRN +1
0208	01012	167344R	LDB EQT12,I	GET BYTE ADR	
0209	01013	004065	CLE,ERB		
0210	01014	002041	SEZ,RSS	EVEN?	
0211	01015	027023R	JMP PUT01	YES,LEFT BYTE	
0212	01016	073242R	STA TEMP1	NO,RIGHT BYTE.	SAVE CHAR
0213	01017	160001	LDA B,I	GET BUFR CONTENTS	
0214	01020	010075	AND LBYT	SAVE LEFT BYTE	
0215	01021	033242R	IOR TEMP1	MERGE NEW CHAR	
0216	01022	027030R	JMP PUT02		
0217	01023	001727	PUT01	ALF,ALF	POSITION NEW CHAR
0218	01024	073242R	STA TEMP1	SAVE IT TEMPORARILY	
0219	01025	160001	LDA B,I	GET BUFR CONTENTS	
0220	01026	010074	AND RBYT	SAVE RIGHT BYTE	
0221	01027	033242R	IOR TEMP1	MERGE NEW CHAR	
0222	01030	170001	PUT02	STA B,I	STORE CHAR
0223	01031	137344R	ISZ EQT12,I	BUMP BYTE ADR	
0224	01032	137346R	ISZ EQT14,I	BUMP T-LOG	
0225	01033	137345R	ISZ EQT13,I	BUMP CHAR COUNT	
0226	01034	027036R	JMP ++2		
0227	01035	037006R	ISZ PUT	CHAR COUNT = 0,SO BUMP RTRN ADR	
0228	01036	127006R	JMP PUT,I	RTRN +1 OR +2	

0230*

0231* RSET--CLEARS STATUS & T-LOG EQT ENTRIES,CNVRTS

0232* BUFR ADR TO BYTE ADR,RETURNS +1 IF BUFR LENGTH

0233* =0,ELSE +2.

0234*

0235	01037	000000	RSET	NOP	
0236	01040	002400	CLA		
0237	01041	017176R	JSB STAT	CLR ANY PARITY ERRORS	
0238	01042	163342R	LDA EQT10,I	GET BUFR ADR	
0239	01043	001200	RAL	CNVRT TO BYTE ADR	
0240	01044	173344R	STA EQT12,I	AND STORE IT	
0241	01045	163343R	LDA EQT11,I	GET BUFR LGTH	
0242	01046	002003	SZA,RSS	ZERO?	
0243	01047	027061R	JMP RST01	YES,ERROR	
0244	01050	002020	SSA	NO. CHARS OR WORDS SPECIFIED?	
0245	01051	027054R	JMP RST02	CHARS	
0246	01052	001000	ALS	WORDS,SO CNVRT TO NEG BYTE COUNT	
0247	01053	003004	CMA,INA		
0248	01054	173345R	RST02	STA EQT13,I	STORE NEG BYTE COUNT
0249	01055	002400	CLA		

```

0250 01056 173346R STA EQT14,I CLR T-LOG
0251 01057 037037R ISZ RSET BUMP RTRN ADR
0252 01060 127037R JMP RSET,I RTRN +2
0253*
0254 01061 002404 RST01 CLA,INA INDICATE INVALID REQ ERROR
0255 01062 017176R JSB STAT
0256 01063 117037R JSB RSET,I RTRN +1

```

```

0258*
0259* SETQI--SET EQT LINKS DURING INITIALIZE

```

```

0260* ENTER WITH A = EQTX ADR

```

```

0261*
0262 01064 000000 SETQI NOP
0263 01065 073322R STA IQT18
0264 01066 002004 INA
0265 01067 073323R STA IQT19
0266 01070 002004 INA
0267 01071 073324R STA IQT20
0268 01072 002004 INA
0269 01073 073325R STA IQT21
0270 01074 002004 INA
0271 01075 073326R STA IQT22
0272 01076 002004 INA
0273 01077 073327R STA IQT23
0274 01100 002004 INA
0275 01101 073330R STA IQT24
0276 01102 002004 INA
0277 01103 073331R STA IQT25
0278 01104 043231R ADA P14
0279 01105 073332R STA IQT39
0280 01106 002004 INA
0281 01107 073333R STA IQT40
0282 01110 002004 INA
0283 01111 073334R STA IQT41
0284 01112 002004 INA
0285 01113 073335R STA IQT42
0286 01114 002004 INA
0287 01115 073336R STA IQT43
0288 01116 002004 INA
0289 01117 073337R STA IQT44
0290 01120 127064R JMP SETQI,I

```

```

0292*
0293* SETQ--SAVES A&B REG,SETS EQT LINKS

```

```

0294*
0295 01121 000000 SETQ NOP
0296 01122 073234R STA SAVA SAVE A & B
0297 01123 077235R STB SAVB REG
0298 01124 060300 LDA EQTB GET EQT ADR
0299 01125 040056 ADA P03 EQT04 ADR
0300 01126 053340R CPA EQT04 NEW SAME AS OLD ADR?
0301 01127 127121R JMP SETQ,I YES,EQT'S ALREADY SET SO RTRN
0302 01130 073340R STA EQT04 NO,CALCULATE & SET REST
0303 01131 040060 ADA P05 OF EQT ADDRESSES

```

```

0304 01132 073341R    STA EQT09
0305 01133 002004    INA
0306 01134 073342R    STA EQT10
0307 01135 002004    INA
0308 01136 073343R    STA EQT11
0309 01137 002004    INA
0310 01140 073344R    STA EQT12
0311 01141 002004    INA
0312 01142 073345R    STA EQT13
0313 01143 002004    INA
0314 01144 073346R    STA EQT14
0315 01145 040056    ADA P03
0316 01146 073347R    STA EQT17
0317 01147 160000    LDA A,I          GET EQT18 ADR FROM
                                EQT17 (EQTX POINTER)
0318 01150 073350R    STA EQT18
0319 01151 002004    INA
0320 01152 073351R    STA EQT19
0321 01153 002004    INA
0322 01154 073352R    STA EQT20
0323 01155 002004    INA
0324 01156 073353R    STA EQT21
0325 01157 040057    ADA P04
0326 01160 073357R    STA EQT25
0327 01161 043231R    ADA P14
0328 01162 073360R    STA EQT39
0329 01163 002004    INA
0330 01164 073361R    STA EQT40
0331 01165 002004    INA
0332 01166 073362R    STA EQT41
0333 01167 002004    INA
0334 01170 073363R    STA EQT42
0335 01171 002004    INA
0336 01172 073364R    STA EQT43
0337 01173 002004    INA
0338 01174 073365R    STA EQT44
0339 01175 127121R    JMP SETQ,I      RETURN +1
0340*
0341* STAT--STORES A-REG VALUE (STATUS) INTO RIGHT
0342* HALF OF EQT4
0343*
0344 01176 000000    STAT NOP
0345 01177 073240R    STA STAT1      SAVE STATUS
0346 01200 163340R    LDA EQT04,I    GET OLD STATUS WORD
0347 01201 010075    AND LBYT      ZERO OUT OLD STATUS
0348 01202 033240R    IOR STAT1     INCLUDE NEW STATUS
0349 01203 173340R    STA EQT04,I    STORE IT
0350 01204 127176R    JMP STAT,I     RTRN +1

0352*
0353* TMCK--RESETS TIMER-IN-PROGRESS FLAG IF SET
0354* AND INDICATES CANCELLATION OF TIMER REQUEST
0355*
0356 01205 000000    TMCK NOP
0357 01206 006400    CLR
0358 01207 163360R    LDA EQT39,I    GET FLAGS

```

0359	01210	000010	SLA	TIMER IN PROGRESS?
0360	01211	006004	INB	YES, INDICATE CANCEL
0361	01212	001566	ERA, CLE, ELA	CLR FLAG
0362	01213	173360R	STA EQT39, I	
0363	01214	077243R	STB TMREQ	SAVE TIMER REQ INDICATOR
0364	01215	127205R	JMP TMCK, I	RTRN +1
0365*				

0367*

0368*

CONSTANT & VARIABLE STORAGE

0369*

0370 00000

A

EQU 0

A=REG

0371 00001

B

EQU 1

B=REG

0372*

0373* BASE PAGE CONSTANTS

0374*

0375 00053

#

EQU 538

0376 00052

N01

EQU #-1

-1

0377 00051

N02

EQU #-2

-2

0378 00050

N03

EQU #-3

-3

0379 00047

N04

EQU #-4

-4

0380 00046

N05

EQU #-5

-5

0381 00045

N06

EQU #-6

-6

0382 00044

N07

EQU #-7

-7

0383 00043

N08

EQU #-8

-8

0384 00042

N09

EQU #-9

-9

0385 00041

N10

EQU #-10

-10

0386 00040

N64

EQU #-11

-64

0387 00053

P00

EQU #

0

0388 00054

P01

EQU #+1

+1

0389 00055

P02

EQU #+2

+2

0390 00056

P03

EQU #+3

+3

0391 00057

P04

EQU #+4

+4

0392 00060

P05

EQU #+5

+5

0393 00061

P06

EQU #+6

+6

0394 00062

P07

EQU #+7

+7

0395 00063

P08

EQU #+8

+8

0396 00064

P09

EQU #+9

+9

0397 00065

P10

EQU #+10

+10

0398 00066

P17

EQU #+11

+17

0399 00067

P64

EQU #+12

+64

0400 00070

M17

EQU #+13

OCT 17

0401 00071

M37

EQU #+14

OCT 37

0402 00072

M77

EQU #+15

OCT 77

0403 00073

M177

EQU #+16

OCT 177

0404 00074

RBYT

EQU #+17

OCT 377

0405 00075

LBYT

EQU #+18

OCT 177400

0406 00076

M3777

EQU #+19

OCT 3777

0407 00077

M1777

EQU #+20

OCT 177700

0408*

0409 00300

EQT8

EQU 3008

LOC OF EQT POINTER

0410*

0411*

0412 01216 100001

ASD

OCT 100001

AUTO-SPEED/RCV OPTION, LINE OPEN

0413 00063

R10

EQU P08

OCT 10

0414 00055

BT01

EQU P02

BIT 1

0415 01217 020000

BT13

OCT 20000

BIT 13

0416 01220 040000

BT14

OCT 40000

BIT 14

0417 01221 100000

BT15

OCT 100000

BIT 15

0418 01222 000000

CFG

NOP

CONFIG CODE

0419 01223 000000

CONWD

NOP

CONTROL WORD

0420 01224 000033

ESC

OCT 33

0421 01225 000027

ETB

OCT 27

0422 01226 017700

FCODE

OCT 17700

FUNCTION CODE MASK

0423	01227	000000	ID	NOP	DRIVER ENTRY ID CODE
0424	01230	177760	N16	DEC -16	
0425	01231	000016	P14	DEC 14	
0426	00070		P15	EQU M17	+15
0427	01232	000000	P2616	NOP	DUMMY
0428	01233	000000	RATE	NOP	BAUD RATE CODE
0429	00056		RCODE	EQU P03	REQ CODE MASK
0430	01234	000000	SAVA	NOP	A=REG
0431	01235	000000	SAVB	NOP	B=REG
0432	01236	000000	SEQ	NOP	SEQUENTIAL COUNT OF DVR ACCESSSES
0433	01237	000141	SMALA	OCT 141	LOWER CASE A
0434	01240	000000	STAT1	NOP	STATUS
0435	01241	002522	STOP	OCT 2522	
0436	01242	000000	TEMP1	NOP	TEMPORARY STORAGE
0437	01243	000000	TMREQ	NOP	TIME REQ
0438*					
0439*	FILL CHAR TABLE				
0440*					
0441	01244	001245R	.TPTR	DEF ++1	TABLE OF POINTERS
0442	01245	001251R		DEF TBL0	
0443	01246	001255R		DEF TBL1	
0444	01247	001261R		DEF TBL2	
0445	01250	001265R		DEF TBL3	
0446*					
0447	01251		TBL0	EQU *	TABLE FOR BAUD-RATE-CODES 1-4
0448	01251	177775		DEC -3	FILL FOR ESC-M (DELETE LINE)
0449	01252	177777		DEC -1	ESC-U (NEXT PAGE)
0450	01253	177777		DEC -1	ESC-V (PREV PAGE)
0451	01254	177777		DEC -1	ESC-OCTAL 140 (BACK TAB)
0452*					
0453	01255		TBL1	EQU *	TABLE FOR BAUD-RATE-CODES 5-8
0454	01255	177765		DEC -11	
0455	01256	177775		DEC -3	
0456	01257	177775		DEC -3	
0457	01260	177776		DEC -2	
0458*					
0459	01261		TBL2	EQU *	TABLE FOR BAUD-RATE-CODES 9-12
0460	01261	177704		DEC -60	
0461	01262	177764		DEC -12	
0462	01263	177764		DEC -12	
0463	01264	177772		DEC -6	
0464*					
0465	01265		TBL3	EQU *	TABLE FOR BAUD-RATE-CODE 13-15
0466	01265	177610		DEC -120	
0467	01266	177750		DEC -24	
0468	01267	177750		DEC -24	
0469	01270	177764		DEC -12	
0470*					
0471*					
0472*	TABLE OF CHARS REQUIRING FILLS IF PRECEDED BY ESC				
0473	01271	001272R	.CHAR	DEF ++1	TABLE ADR
0474	01272	000115		OCT 115	M
0475	01273	000125		OCT 125	U
0476	01274	000126		OCT 126	V
0477	01275	000140		OCT 140	OCTAL 140
0478	01276	000145		OCT 145	LOWER CASE E

0479	01277	000112	OCT 112	J
0480	01300	000114	OCT 114	L
0481	01301	000120	OCT 120	P
0482	01302	000123	OCT 123	S
0483	01303	000124	OCT 124	T
0484	01304	000105	OCT 105	E
0485	01305	000121	OCT 121	Q
0486	01306	000127	OCT 127	W
0487	01307	001307R	END1 DEF *	END OF TABLE ADR

0488*

0489*

0490* CONTROL FUNCTION CODES

0491*

0492	01310	000200	LOPEN OCT 200	LINE OPEN
0493	01311	000300	LCLOS OCT 300	LINE CLOSE
0494	01312	004000	AREAD OCT 4000	AUTO READ
0495	01313	004100	PREAD OCT 4100	PSEUDO READ
0496	01314	004200	CSENS OCT 4200	CURSOR SENSE

0497*

0498* SPECIAL CHARACTER TABLE

0499*

0500	01315	001316R	TABSC DEF ++1	TABLE ADR
0501	01316	177775	NUMSC DEC -3	- NUMBER OF SPECIAL CHARS
0502	01317	000021	<u>DC1</u> OCT 21	DC1 CHAR
0503	01320	000003	<u>ETX</u> OCT 3	ETX CHAR
0504	01321	000026	<u>SYN</u> OCT 26	SYN CHAR

0505*

0506* EQT ENTRY POINTERS FOR INITIALIZATION

0507*

0508	01322	000000	IQT18 NOP
0509	01323	000000	IQT19 NOP
0510	01324	000000	IQT20 NOP
0511	01325	000000	IQT21 NOP
0512	01326	000000	IQT22 NOP
0513	01327	000000	IQT23 NOP
0514	01330	000000	IQT24 NOP
0515	01331	000000	IQT25 NOP
0516	01332	000000	IQT39 NOP
0517	01333	000000	IQT40 NOP
0518	01334	000000	IQT41 NOP
0519	01335	000000	IQT42 NOP
0520	01336	000000	IQT43 NOP
0521	01337	000000	IQT44 NOP

0522*

0523* EQT ENTRY POINTERS

0524*

0525	01340	000000	EQT04 NOP
0526	01341	000000	EQT09 NOP
0527	01342	000000	EQT10 NOP
0528	01343	000000	EQT11 NOP
0529	01344	000000	EQT12 NOP
0530	01345	000000	EQT13 NOP
0531	01346	000000	EQT14 NOP
0532	01347	000000	EQT17 NOP
0533	01350	000000	EQT18 NOP
0534	01351	000000	EQT19 NOP

0535	01352	000000	EQT20	NOP
0536	01353	000000	EQT21	NOP
0537	01354	000000	EQT22	NOP
0538	01355	000000	EQT23	NOP
0539	01356	000000	EQT24	NOP
0540	01357	000000	EQT25	NOP
0541	01360	000000	EQT39	NOP
0542	01361	000000	EQT40	NOP
0543	01362	000000	EQT41	NOP
0544	01363	000000	EQT42	NOP
0545	01364	000000	EQT43	NOP
0546	01365	000000	EQT44	NOP
	01366	000030		
	01367	000033		
	01370	000040		
	01371	000020		
	01372	000200		
	01373	175520		
	01374	137777		
	01375	177754		
	01376	000034		

0547

END

*** NO ERRORS ***

#	00375/02	00376/02	00377/02	00378/02	00379/02	00380/02	00381/02
	00382/02	00383/02	00384/02	00385/02	00386/02	00387/02	00388/02
	00389/02	00390/02	00391/02	00392/02	00393/02	00394/02	00395/02
	00396/02	00397/02	00398/02	00399/02	00400/02	00401/02	00402/02
	00403/02	00404/02	00405/02	00406/02	00407/02		
.CHAR	00473/02	00445/01					
.END1	00487/02	00447/01					
.ENTR	00005/01	00063/01					
.TPTR	00441/02	00467/01					
#B13777		00539/01					
#B20		00123/01	00391/01				
#B200		00139/01					
#B40		00119/01					
#D-1200		00195/01					
#D-20		00138/02					
#D24		00084/01					
#D27		00086/01					
#D28		00168/02					
A	00370/02	00449/01	00468/01	00470/01	00317/02		
AREAD	00494/02	00179/01					
ASD	00412/02	00194/01					
#ASYN0	00117/01						
B	00371/02	00262/01	00446/01	00457/01	00469/01	00065/02	00173/02
	00176/02	00179/02	00182/02	00213/02	00219/02	00222/02	
B10	00413/02	00329/01					
BAD	00157/01	00093/01					
BITCK	00096/02	00241/01	00311/01	00420/01	00099/02	00100/02	00102/02
	00103/02	00105/02	00106/02	00107/02			
BRCFG	00059/01	00090/01	00097/01				
BT01	00414/02	00488/01					
BT13	00415/02	00195/02					

BT14 00416/02 00120/02 00126/02

BT15 00417/02 00110/01 00220/01 00306/01 00341/01 00010/02

CFG 00418/02 00096/01 00107/01 00114/01

CKS01 00124/02 00118/02

CKSYN 00115/02 00234/01 00346/01 00415/01 00128/02

CNTRL 00163/01 00074/01 00186/01 00187/01 00210/01 00222/01 00223/01
00260/01 00264/01 00269/01

CONWD 00419/02 00147/01 00151/01

CSENS 00496/02 00183/01 00356/01

CTL01 00240/01 00169/01

CTL02 00191/01 00176/01

CTL03 00200/01 00178/01

CTL04 00207/01 00180/01

CTL05 00227/01 00184/01

CTL06 00185/01 00196/01 00203/01 00250/01

CTL07 00266/01 00242/01

CTL08 00249/01 00243/01

CTL09 00257/01 00248/01

*CTL10 00245/01

CTL11 00214/01 00182/01

CTL12 00221/01 00235/01

DC1 00502/02 00247/01 00301/01 00327/01

EQT04 00525/02 00300/02 00302/02 00346/02 00349/02

EQT09 00526/02 00173/01 00334/01 00354/01 00495/01 00040/02 00304/02

EQT10 00527/02 00192/01 00208/01 00229/01 00238/02 00306/02

EQT11 00528/02 00228/01 00231/01 00365/01 00077/02 00241/02 00308/02

EQT12 00529/02 00063/02 00070/02 00208/02 00223/02 00240/02 00310/02

EQT13 00530/02 00233/01 00345/01 00499/01 00546/01 00015/02 00022/02
00032/02 00072/02 00205/02 00225/02 00248/02 00312/02

EQT14 00531/02 001/1/01 00368/01 00371/01 00373/01 00071/02 00080/02
 00083/02 00085/02 00224/02 00250/02 00314/02
 EQT17 00532/02 00316/02
 EQT18 00533/02 00165/02 00172/02 00318/02
 EQT19 00534/02 00320/02
 EQT20 00535/02 00116/02 00125/02 00322/02
 EQT21 00536/02 00263/01 00461/01 00324/02
 *EQT22 00537/02
 *EQT23 00538/02
 *EQT24 00539/02
 EQT25 00540/02 00181/02 00326/02
 EQT39 00541/02 00216/01 00299/01 00412/01 00427/01 00433/01 00439/01
 00487/01 00489/01 00528/01 00530/01 00538/01 00540/01 00009/02
 00119/02 00121/02 00135/02 00140/02 00142/02 00192/02 00194/02
 00323/02 00358/02 00362/02
 EQT40 00542/02 00413/01 00450/01 00473/01 00483/01 00526/01 00536/01
 00018/02 00031/02 00069/02 00123/02 00330/02
 EQT41 00543/02 00202/01 00209/01 00048/02 00332/02
 EQT42 00544/02 00172/01 00300/01 00333/01 00340/01 00414/01 00334/02
 EQT43 00545/02 00218/01 00219/01 00304/01 00305/01 00322/01 00326/01
 00342/01 00343/01 00402/01 00002/02 00004/02 00053/02 00054/02
 00336/02
 EQT44 00546/02 00152/02 00163/02 00169/02 00171/02 00338/02
 EQTB 00409/02 00298/02
 EQTX 00060/01 00065/01
 ERRL 00134/02 00387/01 00521/01 00143/02
 ESC 00420/02 00484/01 00029/02
 ETB 00421/02 00017/02
 ETX 00503/02 00350/01 00044/02
 EXEC 00085/01 00148/01
 FCODE 00422/02 00174/01 00355/01 00041/02

GET 00062/02 00504/01 00074/02
ID 00423/02 00155/02 00161/02
IQT18 00508/02 00065/01 00263/02
IQT19 00509/02 00112/01 00124/01 00125/01 00137/01 00140/01 00265/02
IQT20 00510/02 00118/01 00122/01 00267/02
IQT21 00511/02 00104/01 00269/02
IQT22 00512/02 00071/01 00271/02
IQT23 00513/02 00073/01 00273/02
IQT24 00514/02 00075/01 00275/02
IQT25 00515/02 00069/01 00277/02
IQT39 00516/02 00078/01 00279/02
IQT40 00517/02 00079/01 00281/02
IQT41 00518/02 00080/01 00283/02
IQT42 00519/02 00081/01 00285/02
IQT43 00520/02 00082/01 00287/02
IQT44 00521/02 00088/01 00289/02
LBYT 00405/02 00160/02 00214/02 00347/02
LCLOS 00493/02 00177/01
LOG 00151/02 00167/01 00292/01 00406/01 00185/02
LOG1 00183/02 00154/02
LOG2 00170/02 00167/02
LOPEN 00492/02 00175/01
LU 00057/01 00064/01 00144/01
M17 00420/02 00100/01 00426/02
M177 00423/02 00246/01 00319/01
*M1777 00407/02
*M37 00401/02
*M3777 00406/02

M77	00402/02 00145/01
N01	00376/02 00465/01 00547/01 00025/02
N02	00377/02 00232/01 00023/02
N03	00378/02 00472/01
N04	00379/02 00122/02
N05	00380/02 00456/01
PN06	00381/02
PN07	00382/02
PN08	00383/02
PN09	00384/02
PN10	00385/02
N16	00424/02 00258/01
PN64	00386/02
NUMSC	00501/02
OK	00191/02 00383/01 00517/01 00198/02
P00	00387/02 00152/01
P01	00388/02 00502/01 00141/02
P02	00389/02 00267/01 00405/01 00049/02 00414/02
P03	00390/02 00150/01 00336/01 00478/01 00497/01 00299/02 00315/02 00429/02
P04	00391/02 00230/01 00379/01 00513/01 00162/02 00325/02
P05	00392/02 00303/02
PP06	00393/02
P07	00394/02 00095/01 00111/01
P08	00395/02 00413/02
PP09	00396/02
PP10	00397/02
P14	00425/02 00278/02 00327/02
P15	00426/02 00132/01 00464/01

OP17 00398/02

P2616 00427/02 00004/01

P64 00399/02 00146/01

PMT01 00062/01 00004/01 00155/01 00158/01

PREAD 00495/02 00181/01

PRTY 00124/01 00120/01

PUT 00204/02 00352/01 00207/02 00227/02 00228/02

PUT01 00217/02 00211/02

PUT02 00222/02 00216/02

RATE 00428/02 00101/01 00103/01 00130/01

RBYT 00404/02 00154/01 00462/01 00068/02 00220/02

RCODE 00429/02 00335/01 00496/01

RD01 00310/01 00294/01

RD03 00338/01 00302/01

RD05 00316/01 00393/01

RD06 00376/01 00312/01

RD07 00386/01 00313/01

RD08 00390/01 00314/01

RD09 00349/01 00324/01

RD10 00332/01 00328/01

RD11 00358/01 00321/01 00353/01 00388/01

RD12 00364/01 00351/01 00381/01

RD13 00372/01 00357/01 00367/01

RD14 00382/01 00378/01

RD15 00307/01 00347/01 00384/01

READ 00288/01 00070/01 00296/01 00307/01 00308/01 00331/01 00337/01
00361/01 00362/01 00374/01

RSET 00235/02 00295/01 00409/01 00006/02 00251/02 00252/02 00256/02

RST01 00254/02 00243/02
RST02 00248/02 00245/02
SAVA 00430/02 00245/01 00318/01 00097/02 00175/02 00183/02 00296/02
SAVB 00431/02 00178/02 00184/02 00297/02
SEQ 00432/02 00156/02 00158/02
SET0 00295/02 00165/01 00290/01 00404/01 00301/02 00339/02
SETQI 00262/02 00067/01 00290/02
SMALA 00433/02 00036/02
SPEED 00272/01 00261/01
STAT 00344/02 00268/01 00330/01 00380/01 00392/01 00479/01 00514/01
00237/02 00255/02 00350/02
STAT1 00434/02 00345/02 00348/02
STOP 00435/02 00129/01
SYN 00504/02 00121/01 00320/01 00542/01
SYNC 00121/01 00116/01
TABSC 00500/02 00268/01
TBL0 00447/02 00442/02
TBL1 00453/02 00443/02
TBL2 00459/02 00444/02
TBL3 00465/02 00445/02
TEMP1 00436/02 00212/02 00215/02 00218/02 00221/02
TMCK 00356/02 00317/01 00426/01 00364/02
TMREQ 00437/02 00298/01 00360/01 00506/01 00011/02 00127/02 00139/02
00197/02 00363/02
#TTABL 00058/01
WRITE 00402/01 00072/01 00410/01 00416/01 00417/01 00507/01 00508/01
00007/02 00012/02 00013/02 00086/02
WRT01 00419/01 00408/01
WRT07 00477/01 00425/01
WRT08 00510/01 00421/01

WRT09 00520/01 00422/01
WRT10 00525/01 00429/01
WRT11 00535/01 00432/01
WRT12 00482/01 00436/01 00448/01
WRT13 00444/01 00453/01
WRT14 00455/01 00451/01
WRT15 00472/01 00459/01
WRT16 00491/01 00486/01 00531/01 00541/01
WRT17 00545/01 00494/01
WRT18 00021/02 00498/01
WRT19 00039/02 00501/01
WRT20 00047/02 00503/01 00043/02
WRT21 00505/01 00475/01 00518/01 00523/01 00533/01 00543/01 00019/02
00034/02
WRT22 00516/01 00512/01
WRT23 00076/02 00480/01 00515/01 00051/02
WRT26 00532/01 00527/01
WRT27 00542/01 00537/01
WRT28 00014/02 00001/02
WRT29 00028/02 00024/02
WRT30 00035/02 00026/02
WRT31 00005/02 00027/02 00055/02
WRT32 00030/02 00037/02 00045/02
WRT33 00084/02 00079/02
XADR 00153/01 00066/01